Agilent CrossLab Start-Up Services

Agilent 7890 Gas Chromatograph

Site Preparation Checklist

Thank you for purchasing an instrument from **Agilent Technologies**. CrossLab Start-Up is focused on helping customers shorten the time it takes to start realizing the full value of their instrument investment. Installation, Introduction, and First Run Assist are service engagements to get your new instrument and lab productive. Success starts here.

Correct site preparation is the key first step in ensuring that your instruments and software systems operate reliably over an extended lifetime. This document is an **information guide and checklist** prepared for you and outlines the supplies, space, and utility requirements for your equipment.

Agilent

Introduction

Customer Responsibilities

Ensure that your site meets the following specifications before the installation date. For details, see specific sections within this checklist, including:

- ❑ The necessary laboratory or bench space is available.
- ❑ The environmental conditions for the site as well as laboratory gases, plumbing and extraction.
- ❑ The power requirements related to the product (e.g. number and location of electrical outlets).
- ❑ The required operating supplies necessary for the product and installation.
- ❑ If Agilent is delivering Installation and Introduction services, users of the instrument should be present throughout these services. Otherwise, they will miss important operational, maintenance, and safety information.
- ❑ For more detailed Site Preparation information Consult the Agilent 7890 Gas Chromatograph Site Preparation Guide.
- ❑ Please consult the Special Requirements section for other product-specific information.
- ❑ When using hydrogen (H2) as the carrier gas or fuel gas, be aware that hydrogen gas can flow into the GC oven and create an explosion hazard. Therefore, be sure that the supply is turned off until all connections are made and ensure that the inlet and detector column fittings are always either connected to a column or capped when hydrogen gas is supplied to the instrument.

Hydrogen is flammable. Leaks, when confined in an enclosed space, may create a fire or explosion hazard. In any application using hydrogen, leak test all connections, lines, and valves before operating the instrument. Always turn off the hydrogen supply at its source before working on the instrument.

Please refer to the **Hydrogen Safety Guide** which is shipped with the Instrument.

Customer Information

- ❑ If you have questions or problems in providing anything described as a Customer Responsibility, please contact your local Agilent or partner support service organization for assistance before the scheduled installation. In addition, Agilent and/or its partners reserve the right to reschedule the installation dependent upon the readiness of your site.
- ❑ Should your site not be ready for whatever reasons, please contact Agilent as soon as possible to re-arrange any services that have been purchased.
- ❑ Other optional services such as extra training, compliance services and consultation for user-specific applications may also be provided at the time of installation. Please discuss with your Agilent Sales representative before the installation is scheduled.
- ❑ Please refer to the other products (i.e.; GC, ALS, CTC, etc.) for site preparation requirements.

Important Customer Web Links

- To access **Agilent training and education**, visit http://www.agilent.com/chem/training to learn about training options, which include online, classroom and onsite delivery. A training specialist can work directly with you to help determine your best options.
- To access the Agilent Resource Center web page, visit https://www.agilent.com/en-us/agilentresources. The following information topics are available:

Agilent CrossLab Start-Up Services Site Preparation Checklist

- Sample Prep and Containment
- Chemical Standards
- Analysis
- Service and Support
- Application Workflows

- The Agilent Community is an excellent place to get answers, collaborate with others about applications and Agilent products, and find in-depth documents and videos relevant to Agilent technologies. Visit https://community.agilent.com/welcome
- Videos about specific preparation requirements for your instrument can be found by searching the Agilent YouTube channel at https://www.youtube.com/user/agilent
- Need to place a service call? Maintenance & Repair | Agilent
- **7890B Manuals** are also available on Agilent.com:
  - **Safety**
    https://www.agilent.com/cs/library/usermanuals/public/7890B_Safety.pdf
  - **Installation and First Startup**
    https://www.agilent.com/cs/library/usermanuals/Public/7890B_Installation.pdf
  - **Operation Manual**
    https://www.agilent.com/cs/library/usermanuals/Public/7890B_Operation.pdf
  - **Maintaining Your GC**
    https://www.agilent.com/cs/library/usermanuals/public/G3430-90052%207890B_Maintaining%20Guide.pdf

Special notes

Download the **Essential Chromatography and Spectroscopy Supplies Catalogs** for a complete overview about available supplies for your new and existing Agilent Instruments https://www.agilent.com/en-us/products/lab-supplies

Site Preparation

Dimensions and Weight

Identify the laboratory bench space before your instrument arrives based on the following table.

Pay special attention to the total height and total weight requirements for all system components you have ordered and avoid bench space with overhanging shelves.

Special notes

- ❑ Allow at least 25 cm clearance between back of GC and wall to dissipate heated air. See picture below. A simple system that includes a GC and a computer requires about 86 cm of bench space.
- ❑ Avoid bench space with overhanging shelves. A 7683 or 7693 automatic liquid sampler will add to the height of the instrument as shown below.
- ❑ G1888A Headspace, 5977 GCMS and QQQ MS are installed to the left of the 7890 and the 7697 Headspace and 220/240 Ion Trap MS are installed to the right. Refer to the "Dimensions and Weight" section of the "Agilent GC, GC/MS, and ALS Site Preparation Guide" for more detail.

Instrument Dimensions

Component	Height cm (in)	Width cm (in)	Depth cm (in)	Weight kg (lb)
Agilent 7890 GC	50 cm (19 in)	59 cm (23 in)	54 cm (21 in)	50 kg (112 lb)
7890 with 3rd detector	50 cm (19 in)	68 cm (27 in)	54 cm (21 in)	57 kg (125 lb)
7683 Auto-injector	42 cm above GC (16.5 in)			3.1 kg (7 lb)
7683 Tray		30 cm Left of GC (12 in)		3.0 kg (7 lb)
7693 Auto-injector	50 cm above GC (20 in)			3.9 kg (9 lb)
7693 Tray		45 cm Left of GC (18 in)	2 cm (1 in) in front of GC	6.8 kg (15 lb)

Environmental Conditions

Operating your instrument within the recommended temperature ranges ensures optimum instrument performance and lifetime.

- Performance can be affected by sources of heat & cold e.g. direct sunlight, heating/cooling from air conditioning outlets, drafts and/or vibrations.

- The site's ambient temperature conditions must be stable for optimum performance.
- For storage or shipping, the allowable temperature range is -40 to 70°C and the allowable humidity range is 5-95%, non-condensing. After exposing the GC to extremes of temperature or humidity, allow 2 hours for it to return to the recommended ranges.
- Refer to the "Environmental Conditions" section of the "Agilent GC, GC/MS, and ALS Site Preparation Guide" for more detail.

Instrument description	Operating temperature range °C (F)	Operating humidity range (%)	Heat dissipation (BTU)
7890 Series GC	15 to 35 °C (59 to 95 °F)	5 to 95%	7681
7890 Series GC (Fast ramp oven)	15 to 35 °C	5 to 95%	10,071

Heat Dissipation

Your facilities manager may wish to know the amount of heat that the system generates in order to establish its contribution to the overall room ventilation requirements.

The following table may help you calculate the additional BTU's of heat dissipation from this new equipment. Maximums represent the heat given off when heated zones are set for maximum temperatures.

Refer to the "Heat Dissipation" section of the " Agilent 7890 Gas Chromatograph Site Preparation Guide " for more detail.

Oven type	Heat dissipation
Standard oven ramp	**7,681 BTU / hour maximum**
Fast oven ramp (options 002 and 003)	**10,071 BTU / hour maximum**

Venting the Oven - Oven Heat Deflector Option 306 or Part Number G1530-80650

Below is a picture that shows the back view of an installed 7890 GC - with the Oven Heat Deflector installed. The exhaust duct is 10 cm (4 inches) in diameter and adds 14 cm (5.5 inches) to the back of the GC.

The connecting duct should provide unrestricted flow for the oven air and be as short and straight as possible.

With the exhaust deflector installed the exhaust is about 65 CFM (ft3/min /1.840 m3/min). Without the deflector, the exhaust rate is about 99 CFM (ft3/min /2.8 m3/min).

Refer to the "Exhaust Venting" section of the "Agilent GC, GC/MS, and ALS Site Preparation Guide" for more detail.

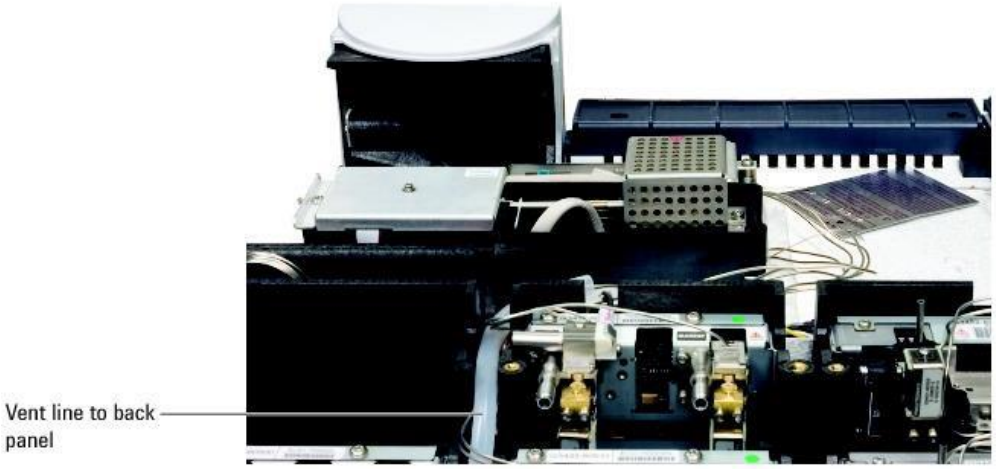
Venting the uECD, TCD or Split-Splitless Inlet Vent gas flows to a Fume Hood or venting manifold

If using hydrogen carrier gas with either a micro Electron Capture (uECD) or Thermal Conductivity (TCD) Detector the GC will vent uncombusted hydrogen from the detector exit. In addition, if a Split/Splitless or

Multimode Inlet is used, hydrogen will dissipate from both the inlet split and septum purge vents. In both cases you must either safely vent the exhaust gas or operate the GC inside a fume hood.

The uECD exhaust vents through a stainless-steel tube, connected to a length of large I.D. tubing that exits the back panel. This should be routed to a fume hood or appropriate venting system. Agilent Technologies recommends a vent line internal diameter of 6 mm (1/4-inch) or greater. With a line of this diameter, the length is not critical. Make sure that the venting system does not put a direct negative pressure on the vent tube from the GC.

Below is a picture that shows the back view of a 7890 GC with the micro Electron Capture Detector vent tube exiting the back of the instrument.



Power Requirements

The GC power consumption and requirements depend on the type of oven that you ordered and the country the unit is shipping to.

The following table Lists the AC Power requirements for various 7890 GC configurations:

Instrument Description	Line Voltage and Frequency (V, Hz)	Maximum Power Consumption (VA)	Power Outlet Current Rating
7890 Series GC (Standard Oven)	Americas: 120 VAC single phase (+/−10%) 48 - 63 Hz	2250	20 amp dedicated
7890 Series GC (Standard Oven)	220/230/240 VAC single/split phase (+/−10%) 48 - 63 Hz	2250	10 amp dedicated
7890 Series GC (Fast ramp oven)	220/230/240 VAC single/split phase (+/−10%) 48 - 63 Hz	2950	15 amp dedicated
7890 Series GC (Fast ramp oven)	North America 240 VAC – Instrument option #002 208 VAC requires 220 VAC Instrument option # 003	2950	15 amp dedicated
7890 Series GC (Fast ramp oven)	Japan 200 VAC split phase (+/−10%) 48 - 63 Hz	2950	15 amp dedicated

Notes

- The number and type of electrical outlets depends on the size and complexity of your system. For example, in addition to the dedicated outlet for the GC, a system with a computer, monitor, printer, and HUB/Switch requires 4 additional outlets on a separate circuit.
- The outlet for the GC must be dedicated to the GC with a dedicated ground.
- The GC will have a label next to the power cord connector that describes the line voltage requirements.

- **Option 003 is for any Country with standard 120/240 VAC to accommodate 208 VAC Power.**
- Power line conditioners that contribute any power line distortion should not be used with the Agilent 7890 GC.
- Refer to the "Power Consumption" section of the "Agilent GC, GC/MS, and ALS Site Preparation Guide" for more detail.
- It is important to measure the line voltage at the receptacle for the GC to insure compatibility with the power configuration of the GC.

7890 Power Cords

Refer to the "Power Consumption" section - "Common Instrument Power Cord Plugs" - of the "Agilent GC, GC/MS, and ALS Site Preparation Guide" for more detail.

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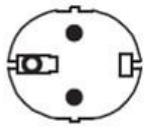
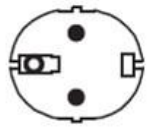
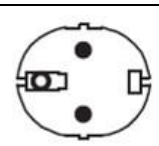
Part Number	Country	Voltage	Amps	Length-m	Type	Wall Termination	Plug Termination
8121-0675	Argentina	240	16	4.5	C19	AS 3112	
8120-1369	Australia, New Zealand	240	10	2.5	C13	AS 3112	
8120-8619	Australia	240	16	2.5	C19	AS 3112	
8121-1787	Brazil	240	16	2.5	C19	IEC 60906-1	
8121-1809	Brazil	240	10	2.5	C13	IEC 60906-1	
8120-6978	Chile	240	10	2.5	C13	CEI 23-16	
8121-0070	China	220	16	2.5	C19	GB 1002	
8121-0723	China	220	10	2.5	C13	***GB 1002***	
Part Number	**Country**	**Voltage**	**Amps**	**Length-m**	**Type**	**Wall Termination**	**Plug Termination**
8120-3997	Denmark, Greenland	230	10	2.5	C13	AFSNIT 107-2-01	
8120-8622	Denmark, Switzerland	230	16	2.5	C19	Swiss/Denmark 1302	

8120-8621	Europe	220/ 230/ 240	16	2.5	C19	CEE/7/V11	
8121-1222	Korea	220/ 230/ 240	16	2.5	C19	CEE/7/V11	
8121-1226	Korea	220/ 230/ 240	16	2.5	C13	CEE/7/V11	
8121-0710	India, South Africa	240	15	2.5	C19	AS 3112	
8120-5182	Israel	230	10	2.5	C13	Israeli SI32	
8120-0161	Israel	230	16,16 AWG	2.5	C19	Israeli SI32	
8120-6903	Japan	200	20	4.5	C19	NEMA L6-20P	
Part Number	**Country**	**Voltage**	**Amps**	**Length-m**	**Type**	**Wall Termination**	**Plug Termination**
8120-8620	**United Kingdom, Hong Kong, Singapore, Malaysia**	240	13	2.5	C19	BS1363/A	
8120-8705	**United Kingdom, Hong Kong, Singapore, Malaysia**	240	10	2.3	C19	BS1363/A	
8120-6894	North America Canada, Mexico, Untied States	120	20	2.5	C19	NEMA 5-20P	

8121-0075	North America Canada, Mexico, Untied States	240 15 2.5 C19 (Option 002) Also for 208 VAC Power – the GC is configured for 220 VAC (Option 003)		NEMA L6-15P	
8120-6360	Taiwan, South America	120 20 2.5 C19		NEMA 5-20P	
8121-1301	Thailand	220 15 1.8 C19			

Gas Selection

- Refer to the "Gas and Reagent Selection" section in the "Agilent GC, GC/MS and ALS Site Preparation Guide" for more detail.
- Agilent recommends a carrier and detector gas purity of 99.9995% or better. Air for flame detectors should be zero grade. Agilent also recommends using traps to remove hydrocarbons, water, and oxygen.
- When used with capillary columns, GC detectors require a separate makeup gas for optimum sensitivity. This table lists gas recommendations for capillary columns and the preferred makeup gas types.
- The inlet electronic pressure control (EPC) modules are calibrated for up to 4 carrier gases: Split/Splitless capillary (SS), Purged packed (PP), Programmable temperature vaporization (PTV), Multi-Mode (MM), and cool on-column (COC) are calibrated for Helium, Hydrogen, Nitrogen, and Argon methane 5%.
    - Volatiles inlet VI is calibrated for only Helium and Hydrogen.
- For GC/MS requirements, refer to the "GC/MS Gas and Reagent Requirements" section in the "Agilent GC, GC/MS and ALS Site Preparation Guide"

Detector	Carrier gas	Make up 1st choice	Make up 2nd choice	Purge or reference
Electron capture	Hydrogen Helium Nitrogen Argon/methane 5%	Nitrogen Nitrogen Nitrogen Argon/methane 5%	Argon/methane 5% Argon/methane 5%	Anode purge is automatically the same as the makeup-no gas connection at the back of the GC
Flame ionization	Hydrogen Helium Nitrogen	Nitrogen Nitrogen Nitrogen	Helium Helium	Hydrogen and air for detector
Flame photometric	Hydrogen Helium Nitrogen	Nitrogen Nitrogen Nitrogen	None	Hydrogen and air for detector
Nitrogen phosphorous	Helium Nitrogen	Nitrogen Nitrogen	Helium	Hydrogen and air for detector
Thermal conductivity	Hydrogen Helium Nitrogen	Must be same as carrier and reference	Must be same as carrier and reference	Reference must be same as carrier and makeup

Gas Supply Pressures

- Refer to the "General Requirements" section under "Gas Supplies" in the "Agilent GC, GC/MS and ALS Site Preparation Guide" for more detail.

- The following tables list minimum and maximum pressures in psi for each electronic pneumatic control module (EPC). These requirements are for the input to the EPC module located at the back of the gas chromatograph. Conversions: 1 psi = 6.8947 kPa = 0.068947 Bar = 0.068 ATM.

Detectors

	FID	NPD	TCD	ECD	FPD
Hydrogen pressure (psi)	35-100	35-100			45-100
Air pressure (psi)	55-100	55-100			100-120
Make up pressure (psi)	55-100	55-100	55-100	55-100	55-100
Reference pressure (psi)			55-100		

Auxiliary EPC and Pneumatic control Channels

The minimum supply pressure for AUX and PCM modules is 20 psi greater than pressure used in your method. For example, if you need a pressure of 20 psi for the method, the supply pressure must be at least 40 psi.

	AUX EPC	PCM 1	PCM 2 or PCM Aux
Maximum pressure (psi)	120	120	120 with Forward pressure control 50 with Back pressure control

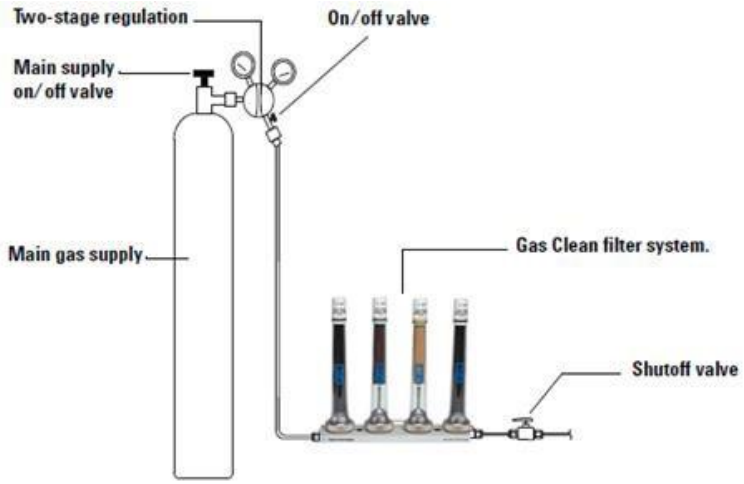
Inlets

The minimum supply pressure for inlet modules is 20 psi greater than pressure used in your method. For example, if you need a pressure of 40 psi for the method, the supply pressure must be at least 60 psi.

	SSL 150	SSL 100	MMI	PPIP	PCOC	PTV
Carrier max (psi)	170	120	170	120	120	120

Gas and Plumbing Supplies

1. Refer to the "Gas Plumbing" section in the "Agilent GC, GC/MS and ALS Site Preparation Guide" for more detail.
2. Gases are supplied by tanks, internal distribution system, or gas generators. Tank supplies require two stage, pressure regulation. To connect tubing to the supply, it must have one 1/8-inch Swagelok female connector for each gas. Make sure that your regulator has the appropriately sized adapter to end with a 1/8-inch Swagelok female connector.
3. If your order did NOT include parts to connect the gas supply to your 7890 GC, you must supply pre-cleaned, 1/8-inch copper tubing and a variety of 1/8-inch Swagelok fittings to connect the gas supply(s). Refer to the "GC Installation Kits" and "GC Plumbing" sections of this checklist for Part Numbers.
4. **Never use liquid thread sealer to connect fittings. Never use chlorinated solvents to clean tubing or fittings.**
5. Agilent also recommends using traps to remove water, hydrocarbons, and oxygen or a combination trap such as the "Gas Clean" Filter System that removes all three.



Sp et Carrier Connections

2. FID, FPD and NPD need dedicated detector air supply
3. For Gas supply runs longer than 15 feet, use 1/4-inch tubing to prevent pressure drop
4. Do not reuse old copper tubing which can become brittle and break

Gas Clean Filter Configurations

Refer to the "Gas Plumbing/Filters and Traps" section of the "Agilent GC, GC/MS, and ALS Site Preparation Guide" for more detail. Another good resource is the "Agilent Gas Clean Filter System User Manual" - http://www.chem.agilent.com/Library/usermanuals/Public/GasCleanFilter_5973-1528.pdf

Available GC Pressure regulators:

All Agilent regulators are supplied with the 1/8-inch SwagelokÒ female connector.

Gas Type	CGA Number	Pressure Range	Part Number
Air (medical grade)	346	0-125 PSIG (8.6 Bar)	5183-4641
Hydrogen, Argon/Methane	350	0-125 PSIG (8.6 Bar)	5183-4642
Oxygen	540	0-125 PSIG (8.6 Bar)	5183-4643
Helium, Argon, Nitrogen	580	0-125 PSIG (8.6 Bar)	5183-4644
Air (Zero grade, for GC applications)	590	0-125 PSIG (8.6 Bar)	5183-4645

Common Plumbing Supplies

Recommended Supplies to make the GC system installation go smoother.

Description	Part Number
1/8-inch Copper Tubing - pre-washed - 50 feet	5180-4196
1/8-inch thick wall Stainless Steel Tubing - 20 Feet	7157-0210
1/8-inch Ball Shutoff Valve for Carrier Gas Supplies (order 1 for each inlet system)	0100-2144
PTFE tape (Never use liquid thread sealer to connect fittings.)	0460-1266

Miscellaneous Gas Plumbing Information

1. Cryogenic cooling with Liquid N2 requires 1/4-inch insulated copper tubing – 25-30 PSI supply.
2. Cryogenic cooling with Liquid CO2 requires 1/8-inch heavy-walled, stainless steel tubing – 750-1000 PSI supply – tank with dip (syphon) tube.
3. Cryogenic Liquid CO2 coolant must be free of particulate material, oil, and other contaminants - A 2 micron particulate filter is provided with the Liquid CO2 Cryogenic cooling accessories.
4. Internal Valco® rotary Valve actuation requires a separate pressurized, dry air at 55 psi.
5. If you have not requested option 305 (pre-plumbed GC), you must supply pre-cleaned, 1/8-inch copper tubing and a variety of 1/8-inch Swagelok® fittings to connect the GC to inlet and detector gas supplies.

Considerations for Hydrogen Carrier Gas

If planning to use hydrogen carrier gas, note that special considerations apply due to hydrogen's flammability and chromatographic properties. Refer to the to the "Gas Supplies/Requirements for Hydrogen as a Carrier Gas" section in the "Agilent GC, GC/MS and ALS Site Preparation Guide" for more detail.

Hydrogen Safety

When using hydrogen as the carrier gas or fuel gas, be aware that hydrogen gas can flow into the GC oven and create an explosion hazard. Therefore, be sure that the Hydrogen gas supply is turned off until all connections are made and ensure the inlet and detector column fittings are either connected to a column or capped at all times when hydrogen gas is supplied to the instrument.
In any application using hydrogen, leak test all connections, lines, and valves before operating the instrument. Agilent highly recommends the G3388B Leak Detector or equivalent to safely check for leaks.

Supply tubing for Hydrogen Gas

Agilent recommends using NEW, chromatographic quality copper or stainless steel tubing and fittings when using hydrogen.

Do not re-use old tubing when installing or switching to hydrogen carrier gas. Hydrogen gas tends to remove contaminants left on old tubing by previous gases (by helium, for example).

These contaminants can appear in detector output as high background noise or hydrocarbon contamination for several weeks.

Do not use old copper tubing with hydrogen gas. Old copper tubing can become brittle and create a safety hazard.

Hydrogen Gas Supplies

Hydrogen can be supplied from a gas generator or from a cylinder.

Agilent recommends use of a high-quality hydrogen gas generator. A high-quality generator can consistently produce purity > 99.9999%, and the generator can include built-in safety features such as limited flow rates, and auto-shutdown.

If using a hydrogen gas cylinder, Agilent recommends use of Gas Clean Filters to purify the gas. Consider additional safety equipment as recommended by your company safety personnel.

GC Installation Kits

Pre-configured kits to make the GC system installation go smoother.
All kits include two shutoff valves – one for each inlet carrier supply.

Description	Part Number
Installation Kit for FID/NPD/FPD (Includes Gas Clean Filter Kit CP736538) for Moisture, O2 and Hydrocarbon removal. 	19199N
Installation Kit for TCD/ECD/MSD - no Gas Filters Included - order separately for ECD - Gas Clean Filter is included with MSD. 	19199M

Available Kits for 7890 GC system installation:

Kit	Part number
Gas Clean carrier gas filter kit, 1/8-inch	CP17974

Other Requirements

Your Agilent 7890 GC comes with an analytical column: 19091J-413 (HP5, 30 meter, 0.32mm x 0.25µm). Our checkout standards are designed to work with this column. In many cases, you will need to select a different column for your application. For information on GC Column Selection, refer to:

http://www.agilent.com/cs/library/catalogs/Public/5990-9867EN_GC_CSG.pdf

Tools and Consumables Supplied with your GC

Tool or consumable	Used For
Inlet wrench for Turn Top - Split/Splitless and Multimode Inlets only	Replacing inlet septa and liners
¼-inch nut driver - FID Only	FID/NPD jet replacement
¼-inch X 5/16 inch wrenches	Column Installation
FID flow measuring insert	FID troubleshooting
Ceramic wafer column cutter	Column installation
1/8-inch nuts & ferrules, Swagelok, brass	Connect gas supplies
Inlet septa appropriate for type	Injection port seal
Inlet insert or liner	Injection port
Capillary Column Ferrules - Graphite	Column installation
2 Capillary Column Nuts	Column installation
2 Column Hangers	Column installation
Gas ID Labels	For Labeling Gas Supply Tubing to Inlets and Detectors
LAN Cable	Communication to the GC

Recommended Tools for Maintenance

Tool	Used For
GC Tool Kit - 5182-3456	Basic Tools in a zipper tool bag (Included with the Installation Kit Part Number 19199M)
ECD/TCD Detector plug, 5060-9055	Inlet pressure decay test
Digital flow meter 220-1170	Verifying flows, checking for leaks and plugs
Electronic gas leak detector - G3388B	Pin pointing gas leaks. Safety checks when using Hydrogen.
T10 Torx driver - 5182- 3466	Remove FID Collector. Remove covers to access EPC modules, traps
T20 Torx driver - 5182- 3465	Replace NPD Bead.
Tubing cutter for 1/8-inch Copper and 1/16-inch Stainless Steel. - 5190-1442	Cut gas supply tubing
Assorted wrenches: ¼, 3/8, 7/16, 9/16 inch	Gas supply and plumbing fittings.
Electric vial crimper - 5190-3188	Assure consistently airtight vial closure no matter who does the crimping.

Recommended Supplies for GC Maintenance

First time GC users should consider stocking the following supplies to maintain their system. Please refer to the Agilent Consumables and Supplies Catalog for part numbers and recommended maintenance periods or visit

http://www.chem.agilent.com/en-US/Promotions/pages/catalog.aspx

Supply	Used For
Inlet supplies	Septa, O-rings, liners, adapter and seals
Inlet PM kits	Kits with individual parts needed to maintain an inlet
Column supplies	Nuts, ferrules, adapters, guard columns, retention gaps
Detector supplies	Jets, beads, liners, adapters, cleaning kits
Application supplies	Standards, columns, syringes
Sampler supplies	Vials, caps, electronic crimpers, and syringes.

Autosampler Hardware from Older Systems

If you previously purchased samplers and would like to use these on your new GC, the samplers may need firmware updates. Sampler models that are compatible include: 7683A and 7693A ALS; and 7694B and 7697A Headspace Samplers.

This information is subject to change. For more details on software and hardware compatibility, please contact your sales representative.

Summary Checklist

Use the following checklist to ensure that the site is properly prepared for GC system installation.

- ❑ Ensure that the appropriate installation hardware has been acquired.
- ❑ Ensure that the location in which the GC system is being installed meets the requirements for environmental conditions.
- ❑ Prepare bench space for the GC system. Ensure that the bench has the size and weight capacity to accommodate the GC and associated components.
- ❑ Ensure that system components are oriented so that they can be connected properly.
- ❑ If the system being installed includes an MSD, ensure that the bench allows for proper installation and connection of the fore-line pump.
- ❑ Ensure that appropriate venting is provided for the GC system.
- ❑ Ensure that a dedicated power circuit is available for each device in the system.
- ❑ Ensure that appropriate gas and reagent supplies are provided for the GC system.
- ❑ Ensure that appropriate gas plumbing is provided for the GC system.
- ❑ If the GC uses cryogenic cooling, ensure that appropriate cryogenic cooling supplies are provided for the GC.
- ❑ If the GC system being installed includes a data system, ensure that the PC meets the requirements necessary to properly support the GC system. For more information, see the site prep guide for your data system.
- ❑ If the GC being installed is to be connected to a site LAN, ensure that the appropriate cabling is available.

Service Engineer Review (Optional)

Use this page to document a review of the Site Preparation requirements between the Customer and the Service Engineer.

Service Engineer Comments

If there are any specific points that should be noted as part of performing the site preparation review or other items of interest for the customer, please write in this box.

Site Preparation Verification

Service Order Number _____

Date of Site Prep Review _____

Service Engineer Name _____